

WHAT IS CLAIMED IS:

1. A method of stimulating growth of nerve cells, which method comprises contacting nerve cells with a human Neural Plakophilin Related *Armidillo* Protein (hNPRAP) polypeptide having nerve growth stimulating activity in an amount effective to cause nerve cell growth.

2. The method according to claim 1, wherein the hNPRAP is a full length hNPRAP.

3. The method according to claim 2, wherein the hNPRAP has an amino acid sequence as set forth in SEQ ID NO:4.

4. The method according to claim 1, wherein the growth of nerve cells results in neuronal regeneration.

5. The method according to claim 4, wherein the neuronal regeneration results in synapse formation.

6. The method according to claim 1, wherein the nerve cells are contacted with an hNPRAP induced by an hNPRAP expression stimulating agent.

7. The method according to claim 6, wherein the hNPRAP expression stimulating agent is a gene therapy vector comprising a polynucleotide encoding the hNPRAP and a promoter for expressing the hNPRAP.

8. The method according to claim 6, wherein the growth of nerve cells results in neuronal regeneration.

1 9. A pharmaceutical composition comprising an hNPRAP having nerve
2 growth stimulating activity and a carrier.

1 10. The pharmaceutical composition of claim 9, wherein the hNPRAP is a full
2 length hNPRAP.

1 11. The pharmaceutical composition of claim 10, wherein the hNPRAP has an
2 amino acid sequence as set forth in SEQ ID NO:4.

1 12. A pharmaceutical composition comprising an hNPRAP gene therapy
2 vector, which vector comprises a polynucleotide encoding the hNPRAP and a promoter for
3 expressing the hNPRAP, and a carrier.

1 13. A method of identifying substances that modulate the expression of
2 hNPRAP, which method comprises measuring the levels of hNPRAP expressed in cultured cells
3 that express hNPRAP contacted with a test substance as compared to a control, wherein a
4 difference in the level of hNPRAP expression in the cells contacted with the test substance
5 compared to the control indicates that the test substance modulates expression of hNPRAP.

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